VOL. VIII. No. 21 OCTOBER 12, 1911

THE JOURNAL OF PHILOSOPHY
PSYCHOLOGY AND SCIENTIFIC METHODS

THE LOGICAL IMPLICATION OF MATTER IN THE DEFINITION OF CONSCIOUSNESS

THERE is a theory which relates consciousness and matter to each other as the opposite sides of a surface in relief. The objection to this "double aspect" theory that has weighed most, in criticism, is that the ground of the parallelism between convexity and concavity—to wit, a logical implication of each other—is obviously absent in the parallelism of consciousness and matter. Whatever parallelism experience actually finds between them is not deducible from either concept: there is nothing in the definition of the sensation blue to suggest an afferent nervous current; nothing in the latter to suggest a sensation. They are incommensurate. But when you conceive convexity, in that fact you conceive concavity also, and *vice versa*. They are related as plus and minus. The objection appeals to analysis of the definition of consciousness or of matter, or challenges the advocate of the theory to study his sensation or his neural process and see if there be anything in either of them to suggest the other.

A difficulty which immediately arises when this challenge is accepted has been understood to be decisive against the theory. It is this: Any definition of consciousness which the advocate of the theory may propose as the concept to be analyzed must, in order to fulfil the first requirement of logical definition, be in terms of that which is not consciousness. And this seems to the critic to beg the question. If you define consciousness so, he objects, you make its definition imply matter; but there is then nothing of consciousness in it; what you have got is only matter. That is to assume an equation between them. You state the value of x in terms of y, but then you haven't got x, but only y. It is otherwise with terms that really have the correlation you claim for consciousness and matter. Thus you can equate convexity with concavity in terms of either alone, as $m = -(-m)$. In this there is no assumption. But what

you say of x is that it equals ay, which is something *distinguishable* from x and whose equality to x is just the problem.

But if it be allowed that the disparity between consciousness and matter must be either a distinction between two kinds of reality, or else the distinction between being and not-being, the predicament just described is worse for the critic of the "double aspect" theory than for its advocate. If the distinction is that of being and not-being, whichever is not-being has an internal constitution and structure by virtue of which parts and relations are recognized within it: matter has physical laws and the interaction of bodies; consciousness has interrelated states. Not-being, so interpreted, is hardly distinguishable from being. And if the distinction is within being, and exhausts it, either the connotation of consciousness and that of matter are referable to each other—expressible in terms of each other—or else the distinction is only denotative, and they are not distinguished as *different;* for difference is a discursive relation between differents: *dif*fering from each other is a case of *re*ferring to each other.

Excessive emphasis on the "ultimateness" and "absoluteness" of the difference between these two concepts is just the inductive cue that results in the "double aspect" theory. No one can regard consciousness as not different from matter—least of all our critic, who finds them incommensurable. Nay, among real things that are *other* than each other, experience gives us no fellow to such difference; for difference so utter, they that differ should coincide. And so, in the fact of aspect, we have, indeed, in a thousand forms, disparity that matches the difference between the concepts now before us: *e. g.,* right, left; up, down; plus, minus; convex, concave.

We confess three obvious differences between the two equations which we have taken to represent our critic's conceptions of the relation of convexity to concavity and the relation of consciousness to matter. In equation (1), which is $m = -(-m)$, representing the former relation, the same symbol m stands on both sides; in equation (2) the symbols are different, x on one side, y on the other. In (1) the coefficient also is the same on both sides, namely, unity; in (2) the coefficients are different, unity on one side, a on the other. And in (1) the signs are opposite on the two sides, while in (2) the sign is the same on both sides.

What do these differences mean? To begin with, is (1) monomial and (2) binomial? No; in spite of the fact that there is only one symbol in (1), this equation is binomial in precisely the same sense as (2) is binomial; for it means that a certain attitude toward m, symbolized by the minus sign, transforms m into something *distinguishable from m.* If equation (1) expressed an identity, it would not represent the relation of convexity to concavity, which are not

identical but distinguishable. But what is thus expressed in (1) by difference of sign is expressed in (2) by difference of coefficient; for (2) means that a certain attitude toward the entity symbolized by x (an attitude symbolized by the phrase "divide by a") transforms x into y. In short, the connotation differs, on the two sides, *in both equations alike.* But, on the other hand, the denotation is the same on both sides in each equation, for such is the nature of all equations, whether binomial or any other kind. Thus we have identity of denotation with difference of connotation in each of these equations, and they are so far homogeneous with each other. Now connotation is aspect, which is determined by subjective attitude; and attitudes are interrelated in determinate and accurately expressible ways; as, for instance, by antagonism or mutual exclusion, or by any of an indefinite number of forms of implication. The difference of attitude called antipodal oppositeness, or polarity, is the specific difference expressed in equation (1); whereas the coefficient a, in (2), expresses *mere* difference of attitude, difference in general, including, therefore, that specific difference which is expressed by opposition of sign. Thus equation (1) is a case of equation (2).

To sum up: The objection, stated in these algebraic symbols, was this: m implies $-m$; x does not imply y. Express the fact of relief in terms of m and you have the correlative fact in $-m$ implied in the very definition of m; while, if you express x in terms of y, you have y values, and nothing but y. In short, x and y exclude each other; m and $-m$ imply each other. Our answer is that x implies y just as m implies $-m$; for ay is an aspect of the same denotation as x; and, since the specificity of every aspect of a given denotation is determinable or definable by relation to all other aspects of the same denotation, any one of such aspects, as x, implies, in its definition, every other, and so y, instead of excluding y.

Turning from such abstract considerations to empirical study of the sensation, the same sort of difficulty reappears. We think we find a dynamic relationship of organic to extra-organic processes; this relationship presents a material aspect, which we call neural activity, and a formal aspect, which we call blue, for instance. But the critic objects that all this is much more than sensation, and that we have read our hypothesis into our data. We must keep to the pure sensation; in that, there is no neural process. So, even as, before, all our attempts to propose a definition of consciousness for analysis were ruled out as begging the question, now every sample of the experience to be observed is rejected as impure. There is no sensation that is pure in such a sense as our critic means, for he means subjectivity that implies no objectivity. If this is more than a word, it is a self-contradiction, since subjectivity is subjectivity only in the

fact of correlation with objectivity. Indeed, if our critic were to observe convexity as he proposes that we observe sensation, he would find no implication of concavity in it; nor would he find it convex. His observation would *be* the convexity; the two would coincide, and so would not be two. Convexity in its essence, as convex, would therein no longer be the object of the observation. You have to get outside of your convexity to observe it and its implication of concavity; just so, you have to get outside of your sensation to know it; in it, you know only the object of it. When convexity is said to imply concavity, convexity is just therein not "pure," as the sensation is supposed to be. "Pure" convexity, analogous to "pure" sensation or subjectivity, would be convexity without implication of concavity. That would be zero convexity, so to speak—a self-contradiction. Just so, the "pure" sensation, without implication of objectivity, is a fact of consciousness without the essence of consciousness, which is dynamic relatedness to an object. "Pure" consciousness is consciousness of nothing, or no consciousness.

If our critic have his way, we have nothing left us to discuss. Let us invite his attention to a discussable phenomenon of our own designating, and definable in some such way as this: the simultaneous belonging of an experience to an organism and to another material fact, say the sky. The two belongings are distinguished by a *sui generis* difference of direction or relational "sense," which unambiguously determines the organism to be the subject of the belonging, the sky the object. We have at least as good a right to call this phenomenon by the name of consciousness, or sensation, as our critic has to name that a sensation which he so defines that its definition is contradicted by the naming.

Now, experience is essentially dynamic, and, for an organism, to be active is to be functionally ordinated or focalized. For example, the eye and other parts may be subservient, in different ways and degrees, to the hand. Then the organism is focalized into an organ of touch, of striking, or whatever it may be. Every other function contributes as accessory to this primary function, in the organism's present phase.

We have called consciousness the formal aspect of activity, and we mean by "form" applied to activity what we mean elsewhere, determinateness or definableness. Here, in particular, it is that character that depends on resistance or reactivity. Activity without resistance would be without determination; its character or content would have vanished; it would be activity upon nothing, which, like consciousness of nothing, is nothing. So the resistance that factors in activity is not extraneous to the essence of activity, and consciousness and material processes imply each other not only with the same

logical necessity but with the same polar oppositeness of mutual relation, as the aspects of relief.

Consciousness is thus the inversion or reciprocal aspect of organic activity, virtual, in distinction from externalized or real, activity. Where attention is focalized, action is most resisted. As action approaches free vent, consciousness of the object of this free activity becomes more and more evanescent. At the limit where action is unresisted, it and consciousness go out, vanish together, in inverse "senses" or directions. Where action approaches "pure" (*i. e.*, unresisted) activity, pure positivity, pure subjectivity, consciousness approaches "pure" (*i. e.*, unreacting) passivity, pure negativity, pure objectivity. And such "pure" action and consciousness are pure nothing, action on nothing, sensation of nothing. The vanishing of the two relations together is, in each case, for lack of one of its terms, the term inverse to the term lacking in the other case.

This mutual symmetry between action and consciousness is the consequence of their identity of denotation and mutual inversion of aspect; and any study of the fluctuations and transitions of consciousness, with its modulations of attention and inhibition, is accordingly a study in inverse, a perfect logical function, of corresponding modifications of organic activity; for in the play of the organic functions we shall find incessant modulations between their focalization and their dispersion, incessant shifting of their mutual rank and of the position of primacy among them, to correspond with the changes between margin and focus that are always going on among the elements of consciousness.

The organism is structurally and functionally centralized in a sensori-motor system, where the afferent activity is opposed by the efferent, in a common focus, or in coincident foci, in which action and reaction give form to each other. Here organic reaction has its inception in a preformation, schema or design, as Bergson says, of the developed activity. An intricate manifold of functions are organized: interest determines the ascendency or primacy of a certain one, while others are subservient, being inhibited or reinforced in varying degrees. The whole complex process has this character of focal, unifying organization, a unity expressed in opposite aspects as the simple form of activity, on the one hand, and as the simple object of perceptive consciousness on the other.

ARTHUR MITCHELL.

UNIVERSITY OF KANSAS.

DISCUSSION

A REPLY TO PROFESSOR DEWEY'S REJOINDER

MY purpose in replying to Professor Dewey's recent rejoinder[1] is to point out and, if possible, to remove the misunderstanding which I think he still has of what is at least the intent of the realist platform, especially as concerns procedure. Professor Dewey regards my previous reply as not having met his criticism, and now makes it his main point that questions of fact concerning the application of a proposition can not be decided from its implications. This, however, seems to me to have been only one of many points and inquiries which he made in his original criticism, although he did say that the main object of his discussion was "to protest against trying to reach results by the manipulation of a concept." But, however that may be, and whether or not Professor Dewey may regard my reply as having met the points he intended to raise, now that he has singled out one main question and has made quite clear that he means by manipulation "the deciding the application of a proposition from its implication," I am glad to reply to it alone, reformulating, in so doing, certain parts of my previous reply.[2]

I have reexamined the various statements of the platform, and can not find that any of these in its intent justifies Professor Dewey's interpretation or intimation that the realist would decide a "question of fact having to do with the application of a proposition from its implication" *provided* he *could* employ methods of observation and experimentation for deciding or helping to decide this application. Nor, more specifically, do I find any statement which seems to justify the criticism that the realist decides the application of the theory of "external relations" from its own implications or from its implications as applied in any specific case. But the platform may, of course, suffer from the ambiguous use of terms, or words, and this may be the source of Professor Dewey's misinterpretation. Indeed, I conceive his misinterpretation to be due to the way in which the word "term" is used in the platform and to the formulation of the theory of "external relations" to the effect, namely, that "in the proposition 'the term a is in the relation R to the term b,' aR in no degree constitutes b, nor does Rb constitute a, nor does R constitute either a or b." The platform contains other formulations of the theory, but this one might be misleading because of the word

[1] This JOURNAL, Vol. VIII., No. 3.

[2] The present reply also was submitted to the members of the group and received their general approval.

"term." These formulations, however, state only the meaning of the theory for whatever instances it may be found to apply,—indeed, whether it applies to anything or not,—and make no assertion as to what terms in relation the theory does apply to, not even that it applies to the terms of a proposition in the strict sense of these words. "Term *a*" and "term *b*" are used as variables, *i. e.*, in such a way that there could be substituted for them any entities in relation for which relation the theory, as stated, is found empirically to apply. Such terms or entities might *a priori* be the terms of propositions, or propositions as wholes, or points, or instants, etc. To which of these the theory applies is to be determined by empirical investigation for each case separately and independently, and not by implication from one another; and the formulation of the theory, indeed the entire platform, allows for just this independent investigation. However, with this investigation once made, the result may, of course, be stated in the form of a proposition, with terms (*e. g.*, the point *a* is in the relation *R* to the point *b*), and yet the entities denoted may be anything whatsoever other than the terms (in the strict sense) of a proposition. They might be physical objects, mental states, numbers, atoms, etc. In this sense, then, anything whatsoever may be made the subject of an empirical investigation to determine what terms and relations are present, and whether the "external theory" applies or not; *i. e.*, anything whatsoever may be observed and reasoned about and the results be stated in the form of propositions, *i. e.*, judgments may be made, and inferences drawn from these, and the way thus opened up, perhaps, to new observations.

The realist would certainly agree, then, in general, with Professor Dewey's contention that from the "implications of propositions questions of fact" can not be decided—provided, he would add, these facts are not themselves implied facts, or, if they are, provided there is another way of helping to decide them, namely, by observation or experiment of some kind. Sometimes, however, the only way of deciding certain facts, indeed of discovering them, is by implication from propositions applied on the basis of observation and experiment; and it is, of course, always quite legitimate procedure to develop these implications, confirming them, if possible, by observation and experiment. But Professor Dewey would undoubtedly quite agree with this. And yet he seems to be somewhat critical of the realist's use of this procedure in certain cases, *e. g.*, in those in which, where by observation the theory of "external relations" has been found to be applicable, the implications from this application are developed—whether they are confirmed or not. In certain cases they are, in others they are not. To state certain re-

sults of this kind, namely, observed results with implied results which are confirmed, was also the intent of the platform, and to further explain this procedure was part of the purpose of my first reply. However, to further show just what, in our own minds, our procedure is, and to reply to Professor Dewey's recent inquiries quite succinctly, I will state on just what grounds the "external theory" is held to apply in each case.

The realist would distinguish a number of different types of empirical procedure and a number of different kinds of facts. That there are these seems to be a fact which is itself empirically established. Now among the different types of empirical procedure there are different kinds of observation and experiment, two at least; by one, sense observation and experiment, we get at the physical world; by the other, which, for want of a better name, I call ideal observation, we get at mental processes, and at more subtle, ethereal entities like numbers, possibility, infinity, etc. Professor Dewey, tacitly at least, accepts this second kind of observation; for in his position that the application of a position shall be decided by observation and experiment, he tacitly grants that such a subtle, diaphanous thing as the *applicability* of a proposition can be observed. The realist is quite in agreement with Professor Dewey in this respect; other than physical and mental entities can be observed. Furthermore, the realist also distinguishes different kinds of facts, such as observed and implied facts, physical, mental, logical, and mathematical facts, and, perhaps also as distinct from these, spatial and temporal facts. These facts are to be discovered, analyzed, and their relations to one another ascertained by any specific empirical method which proves efficient. In accordance, now, with these distinctions, the realist decides the application of the "external theory" in each specific case for which it has been asserted in this recent discussion to apply as follows:

1. By "ideal" observation and experiment the realist finds that the theory of "external relations" applies to that cognitive situation in which there is achieved knowledge of theories, of propositions, of numbers, etc.

2. By observation of, and perhaps also by experiment on, physical objects, the realist finds the theory to be applicable to that cognitive situation in which there is genuine knowledge of physical existents.

Comment.—The application in the first case may be said to make the second logically possible—to imply it; but the realist is of the opinion that this implied fact can be confirmed by observation, and so a direct as well as an implied application be established. But still the direct application, by observation and experiment, in the

second case is not so convincing as it is in the first, for the reason that on its basis it is *difficult to meet the contention of the idealist and phenomenalist that the so-called physical object known is in some degree constituted by or modified by the knowing.* This contention ought to be met and answered satisfactorily, and while I hold that the observational evidence establishes a presumption in favor of the validity of the "external theory" in this second case, I have, because of the retort to which it is open, emphasized the first case as a better means of getting hold of the idealist and the phenomenalist. I can observe quite empirically, it seems to me, their knowing of their own theory, and find that the "external theory" applies.

3. By observation of, and perhaps also by experiment on, mental events, the realist finds that the theory applies to that cognitive situation in which there is genuine knowledge of mental existents.

4. Making the distinction between judgment as the act of assertion and the proposition as the state of affairs asserted or the judgment-content, the realist finds that the "external theory" applies (*a*) to the relation of the terms (in the strict sense) of a proposition; (*b*) to the relation of a proposition to that to which it refers, whether this be existential or subsistential; (*c*) to the relation of propositions to one another.

5. By "ideal" observation and experiment the realist finds that the theory applies to the relations between those entities, *such as* intensity-points, space-points, instants, etc., which can not be directly observed physically, but which are implied by certain facts that are so observed.

There may be other cases of the applicability of the theory of "external relations," indeed it may be that it applies to all cases of terms in relation, and that the "internal theory" has no application. But realism is not concerned primarily with the question of the extensive or universal applicability of the "external theory," but only with its validity as respects the cognitive situation. In all of the above cases I should say that it is as much a matter of observation and perhaps also of experimentation that the "external theory" applies as it is a matter of observation and experiment that, for example, the law of inverse squares applies to celestial and molar phenomena, and to the phenomena of static electricity and magnetism (Coulomb's law), etc. Indeed, in the case of these phenomena, in whose investigation inductive, empirical methods are admittedly used, it is often said that the observed facts *imply* the law. Now it is a similar usage which I have sometimes made in saying that the cognitive situation implies or presupposes the theory of "external relations" in the case of knowing *quâ* knowing. This

usage may also have been a source of Professor Dewey's misunderstanding, and perhaps such usage is open to criticism. Indeed I think that some other word than "imply" might be advantageously used here, for this "imply" is different from the deductive "imply." But I have employed the term "imply" in just this sense, that one may say either that a certain law applies to certain phenomena, or, conversely, that the phenomena "imply" the law, and this *is* frequent usage. But if "imply" be used in this way, then our procedure is certainly quite different from that of deciding the application of a proposition from its implication—*provided* direct observational methods can be used to decide this.

To the other questions and statements of Professor Dewey's rejoinder I reply only that it may not be said that I am avoiding any issue raised therein. In reply to these I would say:

1. The mathematical physicist *does* decide by the *implication* of the (existential) propositions of mathematical physics "the scope and place in existence of the entities forming the subject-matter of this science," provided he can decide them in no other way. For example, such a method gives the greater part of the physics of the ether, and it is the only method which does. He decides these questions by physical experiment, or by experiment *and* implication where he can; but in case certain phenomena, discovered by implication, are not accessible to direct experimentation, they remain decided to a certain extent by implication. It is to certain ones of such implied facts, checked up only indirectly by experiment, that the realist by "ideal" observation finds the "external theory" applicable; he accepts them simply at their face value; they are implied existential facts.

2. I quite agree with Professor Dewey that the actual propositions of *mathematical physics* do not rest upon *purely* mathematical implications. Nowhere have I said, either directly or indirectly, that they do. Nor do they rest upon purely experimental inquiries into matters of fact. That which they do rest upon is both experimental inquiries and the use of implicative methods interwoven as closely as possible. That is why one can not argue from the biological, chemical, and physical properties of existence without considering also the implied existential properties.

3. Further, and with apologies to Professor Dewey for seeming to insist on that which he disclaims in his rejoinder, I must reply that the experimental inquiries which he emphasizes are themselves part of the subject-matter of genetic psychology—genetic at least in the broad sense—and that they must be so made is indeed a point of view which is at least implicitly taken by him in *his* view of the nature of that true knowledge to which such inquiries are held to lead.

Therefore, an inquiry concerning the extent to which the genesis of knowledge is relevant to its truth itself becomes relevant in a discussion with an opponent whose general philosophical position means that the truth of achieved knowledge can be defined only in relation to the prior inquiry, and to success, to satisfactoriness—*this all the more so* if it is claimed that "antecedently to any use of a concept of relations" it must be decided whether "knowing is a natural event" and, "if so, how it evolves out of other natural events." *Why* this should be the case, and *why* we should *not* go ahead and make the question as to whether we can use "a concept of relations" in any case a question of fact to be decided by observation and experiment on the things to which we wish to apply the concept, I can not see, unless there is the wish to decide, from the implications of the proposition that "knowledge is a natural event," something concerning the use of a "concept of relations." But such a claim seems to me to contradict the main contention of Professor Dewey's rejoinder regarding procedure, and yet it is a point which he insists upon in his original criticism. Further, while of course such a claim very evidently raises the question of procedure, it is direct evidence for me that that criticism was, as a whole, made from the standpoint of a philosophical position which may well be called broadly genetic. Nor has the rejoinder removed this conviction. For in this I again find evidence that Professor Dewey regards procedure and empiricism and fact in that more limited way which is characteristic of the pragmatistic and genetic standpoint, and in accordance with which there are *fewer types* of experimentation and observation and fact than the realist recognizes. So again I have found, since it is my purpose to argue and not merely to deny, that I must go beyond the merely explicit statements in Professor Dewey's rejoinder and consider the more fundamental position upon which they are dependent. This I have done above, and such a procedure again appears to me, as it did in my original reply, quite pertinent to the discussion. However, my former reply did not purport to be only an answer to Professor Dewey's criticisms; it had also the purpose of being an exposition, and of pointing out lines of possible agreement between the realistic and other positions.

In conclusion I would like to raise one more point, or, indeed, to make an inquiry, and this I would address to whomever it may interest rather than regard it as a further reply to Professor Dewey. My inquiry concerns, on the one hand, the problem of the relation of knowing *quâ* knowing to its object, and on the other, the question of procedure in attacking this problem. The problem and the solutions given to it form that which the realists as well as their critics have recognized as the pivotal question at issue between them, while the

further question as to what means shall be employed in attacking it is important, because no procedure has yet been suggested by any one which seems to be of the nature of a crucial experiment or to lead to a solution which is decisive and uniformly convincing. The problem has been narrowed down in the recent discussion between the realists and their critics to the more precise one of whether or not knowing *quâ* knowing modifies or constitutes its object, or, what is the same thing, what theory of relations applies to this situation; and, of course, if knowing does modify or constitute its object, there is the further problem as to the degree or extent of this "effect."

As concerns procedure in attacking this problem, there is to be found one party which insists that ordinary empirical methods not only are sufficient to solve it, but, indeed, are the only ones which can. Thus, by this party it is usually held, for example, that ordinary empiricism (in common sense and science) shows that any object known (or unknown) is independent of the knowing *quâ* knowing, although knowing may lead indirectly to experiment and so to change. But the objection to this procedure is that it is not crucial; evidence that it is not so is the fact that at least it does not satisfy or convince the idealist and the phenomenalist of the Kantian type, who calmly accept all ordinary empirical methods and results and fit them into their larger idealism and phenomenalism without a murmur. Ordinary empiricism is, then, seemingly incapable of settling this knowing problem; for, seemingly, its results can be absorbed, and it offers no crucial observation or experiment by which to disprove either the idealist's or the phenomenalist's claims. But, on the other hand, neither does the idealist, nor the phenomenalist, nor even the pragmatist offer *any crucial observation or experiment* as a basis for his position, but only arguments. Phenomenalism is based on the premise that knowing modifies or constitutes its object to a certain degree, idealism makes this "effect" either partial or complete, and pragmatism holds that "things undergo change in knowing"; but in each case the position is only argued and not established by a crucial observation or experiment. It may be, of course, that no such mode of establishment or of settling the question is possible; but, if this be the case, it is itself a fact of significance and should receive establishment.

With this the actual state of affairs, then, at the present time, *i. e.*, with each party unable to show decisively by a crucial observation or experiment either that knowing modifies or constitutes its object or that it does not, but able only to argue, the problem of procedure in attacking this fundamentally important problem of knowledge still remains. Is there, or is there not, a crucial experiment or observation by which it may be decisively shown either that knowing

modifies or constitutes its object or that it does not, and if it does, to what extent, and in what cases? And if there is not such an experiment, why is this so and what does it indicate? Is it because of the very nature of the problem? I simply wish to narrow down this question regarding procedure, and so I would respectfully address my inquiry to any and to all parties, and I make it in order to get information, and not to arouse controversy. I myself have used and stated what seems to me to be a crucial observation creating a presumption in favor of the position that knowing *quâ* knowing in no case modifies or constitutes its object. That is the observation of a philosopher's or scientist's knowing of his own theory—whatever this may be. But this observation of mine has been called dialectic, although to use this appellation constitutes imputation and not refutation. So I make appeal for an observation or experiment of another type, if there be such, which *shall be crucial* in nature, and be one which I can repeat, for this is the character of a scientific crucial experiment. If such an one can not be given, what does that indicate? Does it show that the problem is of such a character that it can not be solved in this way, but only by argument? If this be so, then let us find it out. For the purpose of thus narrowing down my inquiry, I request of the empiricist that observation and experiment—and not argument—which will show so decisively that knowing does not modify or constitute its object that there will be no chance for the idealist or phenomenalist to escape. Or of the idealist and phenomenalist I request that observation and experiment—and not argument—which will show decisively that knowing does modify or constitute its object, and *how much*. Or of the pragmatist who states, as does Professor Dewey, that "things undergo change in knowing," I request the experiment and observation, physical, ideal, or what not, but in any case crucial, by which it may be shown that this change is universal for all things, or limited, and in either case *how much* the change is. For *either* universal, for all knowing, for all things, *or* limited it must be! In either case I ask for the crucial observation and experiment—and not argument—by which the universality *or* the limitation can be shown and the amount of the change determined approximately. And if in none of these cases the crucial experiment can be given, then I ask not only *why this* is so, but for that mode of procedure which *shall be adopted* in attacking the knowing problem, *and why*.

It does not answer my questions to say that experience alone solves them. And if the crucial experiment and observation can not be given by which the problem can be solved decisively one way or the other, then must we conclude that for the present the solution is only one of argument influenced by emotional bias and perhaps an

arbitrary use of some theory of relations? Indeed it is to put this alternative to the test that I formulate my request as I do—that I exclude argument and ask for observation and experiment crucial in character. Yet as concerns the outcome, should any one favor me with a response, and whether he cite the observation and experiment asked for, or avoid the issue by presenting only argument, I am confident, indeed I can now observe, that somewhere the principle that knowing *quâ* knowing does not modify or constitute its object will emerge supreme.

I have endeavored to answer the inquiries of Professor Dewey's rejoinder directly, and have done so in the sincere desire to make clear the realist's position, and so to further that agreement with which Professor Dewey in his original criticism acknowledges his sympathy.[3] My final inquiry I make not so much by way of replying to him as to seek information concerning a problem of general interest.

EDWARD GLEASON SPAULDING.

PRINCETON UNIVERSITY.

JOINT DISCUSSION WITH ARTICLES OF AGREEMENT AND DISAGREEMENT: PROFESSOR DEWEY AND DR. SPAULDING

PROFESSOR DEWEY and I have presented in the pages of this JOURNAL during the current academic year articles in discussion of the "Platform of Six Realists." That discussion might have been continued, at least with probable interest to ourselves, for some time by alternate articles of reply and rejoinder. But such a method might easily have involved the danger of a continually increasing mutual misunderstanding and misdirected emphasis. Accordingly, both to avoid this danger and to bring our discussion to a close, we have, rather than continue it by the usual journalistic methods, conferred and discussed in person the matters at issue. The results of our conferences, both agreements and disagreements, we offer as a close to our previous discussion. These results concern all but one of the main points raised in that discussion, including my last reply, the exception being my final inquiry concerning procedure in attacking the problem of the relation of knowing *quâ* knowing to its object. That question, however, I

[3] Since this reply was written, Professor Dewey and I have held a number of conferences for the purpose of discussing the points at issue between us. We have preferred this method of verbal discussion to that of alternate reply and rejoinder. This reply was submitted to Professor Dewey, and the results of our conferences are published subsequently in this issue.

raised as one of general interest rather than by way of reply to Professor Dewey. The following are the results of our verbal discussion, "D. and S." showing agreement, single initials showing reservations, comments, etc.

E. G. SPAULDING.

1. Judgments may be a natural outgrowth of preceding natural events, and may lead to other natural events; but it is an empirical question as to what degree or in what respects they differ from other natural events. (D. and S.)

2. Judgments are things in course (form a mode) of discovery and of inquiry. They lead to "knowing" or an act of assertion. (D. and S.)

3. Judgments, as links in a causal or natural series of events, may change realities, or, through an intervening causal series, lead to changes in reality. (D. and S.)

4. A judgment terminates in a proposition, which is a subsistent and relational complex stating the truth about existents or other subsistents. (D.)

A proposition is a subsistent and relational complex stating the truth about existents or other subsistents. It is the content or "state of affairs" which the judgment asserts, or which is "known." (S.)

5. Judgments as related to entities existing or subsisting simultaneously with the knowing, or assertion, do not change the entities as known or asserted. (D. and S.) (See comments under 8.)

Comment (S.). This holds good in some cases also for entities existing either before or after the "knowing," and in all cases of subsistents.

6. There may be different types of subsistents, among which the proposition is one (type), and discrimination of the relative value or validity of these types may involve the question of the relation of propositions to judgments. (D. and S.)

Reservation (D.). In all cases the determination of the validity of the subsistent depends upon the connection of the subsistent with prior and subsequent inquiry, *i. e.*, upon the judgment series. There are differences in types of inquiry which control the differences of validity.

Comment (S.). In some cases, at least, subsistents are (found to be) independent of the inquiries in which they are discovered, for example, in the case of numbers.

7. Propositions do not modify entities to which they refer (of which they are propositions). (S.) (See 8.)

The subsistent which constitutes the subject-matter of a proposi-

tion does not modify any existent or other subsistent to which it may refer. (D.) (See 8.)

8. This whole situation concerning or involving observation, judgments, propositions, entities known, the relations between these, their character, etc., may itself be made the subject of special study and inquiry, and the result constitute or be the discovery of propositions to which 7 applies. (D. and S.)

Comment (S.). *A.* Not only does 7 apply to the results, stated as propositions, of the inquiry, but 4, 5, 6, 11, 13, and 14 also apply to these results in the respect emphasized by each of these statements, while 1, 2, 3, 9, 10, 12, and 13 apply to the process of inquiry into the situation under discussion. One may say either that the conditions which make inquiry into this specific situation possible, and the propositions which are discovered about it, must be presumed to hold good for any other specific inquiry whose purpose is to discover the truth, or one may state the presumption in the inverse order. Either statement is made simply in recognition of the demands of consistency.

B. In the case of "achieved knowledge" or "knowing," as an outcome of the process of inquiry, it is discovered that there is a distinction between (1) the knowing, as an existent, (2) the proposition, a subsistent, and (3) the entity, either existent or subsistent, which is known and to which the proposition refers. There is also a "knowing" of the proposition. Designating these three entities by *a, b,* and *c,* respectively, there are, then, three relations, *aRb, aRc,* and *bRc,* in which the terms, though related, may be different, —indeed, very different and independent. (*Cf.* 4, 5, 6, and 7, especially 5 and 7.) This means (1) that "knowing" does not modify or constitute either the proposition or the entity (*cf.* 4), and (2) that the proposition does not modify or constitute the entity or entities to which it refers,—briefly, that the theory of "external relations" applies to each of these three relations. The applicability or validity of this theory for these three relations is discovered by that observation which is made possible by making the judgment-proposition-observation situation itself an object of inquiry. (*Cf.* 9.)

Comment (D.). I hold that the process of inquiry and discovery which terminates in a proposition is necessary to the existence of the subject-matter or subsistent of the proposition. In holding that this prior process does not modify its own objective when reached, (i.) I also hold that "study and inquiry" show that the subsistent *is* the existent to which it refers, modified; that this particular sort of modification is just what is denoted by proposition, assertion, knowledge. The subsistent does not, then, modify the existent, for, being logical in status (see 14), it has no existential efficiency, but it *is* a

modification of a prior existent, through the entrance of this latter into a process of doubt-discovery, having for its objective the proposition. (ii.) While the subsistent does not modify, cognitively speaking, the existent to which it refers, the act of assertion, which is existential, operates to bring about a transformation into a more desirable form of the existent referred to. Thus indirectly, a proposition is a medium of a practical, non-cognitive alteration of the thing referred to in knowledge. Otherwise put, the term "thing" in relation to knowledge may denote at least three different matters: (i.) the existent referred to, or denoted; (ii.) the thing *as* known—the propositional subsistent which refers to the thing it is about or of; (iii.) the existent as finally determined through the actual working out of the act of referring the proposition to the thing to which it means to refer or apply. This gives the sense in which I understand 1 and 3.

9. The general method of inquiry consists of observation, experimentation, and inference in reciprocal support of one another, and the inference-judgment situation thus created may be enlarged by the observation or discovery of further implications which show the way to further new observations of "brute facts." Anything can be studied in this way—even the inference-judgment-proposition situation itself—judgments being formed (or occurring) in the course of the inquiry, and propositions being discovered as a result. (D. and S.)

10. There are different kinds of observation and, perhaps, also of experimentation. Thus relations of implication and implied entities and subsistents of different types may be as directly observed as are "brute" existential facts or entities. Some of these observations are made possible only in or through the inference situation, but, *quâ* observations, they are distinct from the inference process itself. (D. and S.)

11. Just as there are different kinds of observation, so there are different kinds or types of entities among both existents and subsistents. (D. and S.)

Reservation (D.). (*Cf.* 6.) In all cases of subsistents the validity or status of these entities depends upon the prior inquiry.

Comment (S.). It is discovered as a result of the inquiry that among both subsistents and existents there are certain types which are *independent* not only of the prior inquiry and of the process of discovery, but of one another; accordingly, not only might certain subsistents subsist, were there no existents, but both certain subsistents and existents might subsist and exist respectively without other types of subsistents and existents. This is but another way of saying that implication is limited by "brute facts," or that certain

entities are logically prior to others, *e. g.*, numbers to counting; *i. e.*, counting presupposes (or implies) numbers, but numbers do not imply counting—or, indeed, anything physical, mental, spatial, or temporal.

Comment (D.). As a result of inquiry, I do not discover that subsistents subsist apart from any existences. On the contrary (see my comment to 8) I think I discover that all subsistents are cognitive references to some existence. One subsistent is logically independent of another subsistent in the measure to which the existent to which one refers is existentially independent of the existence to which the other refers. A subsistent may be "logically prior" to another subsistent; but to speak of a subsistent or logical entity (see 14) being *logically* prior to an existent seems to me meaningless. It is either tautological, like saying that a logical treatment of a thing is a logical treatment of the thing it refers to, or else it confuses logical relationship with existential status. Counting is an act or event; it is existential; numbers are subsistents. Hence to talk about numbers being "logically prior" to counting is to treat counting as if it were one of the numbers. Correspondingly, it is absurd to say that counting is *logically* prior to numbers; for counting is a brute act, and hence, *quâ* counting, non-logical. One connotation or logical contact is logically prior to some others; denotation and connotation do not bear a logical relationship to each other.

12. There are other logical principles than those of inference in the usual and narrow sense of the term, *i. e.*, than the rules and principles of "immediate and mediate reasoning" and of "induction" as found in the text-books. Among these "other logical principles" are those which are involved in the logic of infinite series, of continuity, of relations, of mathematical induction, etc. Use of these enters into inference in a broader sense. (S.)

Comment (D.). I assent, with the restriction that the "usual sense" is purely conventional, and should be surrounded. In the proper sense of "inference" I find all logical principles to be involved in inference, in the sense of existing only because the fact of inference exists. (See 14, Comment, Dewey.)

13. Logic in this broader sense is nevertheless limited, *i. e.*, not all that exists or subsists is logical or, at least, completely logical. Connotation and denotation, then, are to be recognized as having each its proper sphere and limitation, and "denotative matters" can not be treated as connotative in the sense that the former ever lose their distinctly denotative character. The two supplement one another, and anything can be inquired into and so put into the denotative-connotative situation, or, rather, this situation can be found. (D. and S.) (*Cf.* 8 and 9.)

14. All entities, both existent and subsistent, are, however, partly logical in the sense that, while an alogical aspect may be distinguished, this aspect coexists or cosubsists with the logical in much the same way as do a relation and its converse. The particular existence or subsistence of any logical aspect or entity of a certain type is itself "brute fact," and, while it is to be discovered by any method which proves efficient for this, it exists or subsists independently of this inquiry and discovery. Entities, either those wholly or those partly logical, are not made logical by being taken into an inference-judgment situation of any type; but, on the contrary, they can be taken into this situation because they already are logical entities of some type and in some respect, one of the outcomes of the inquiry being the discovery of this "respect" and type. Then, since everything can be taken into the inference situation in some way, *i. e.*, can be reasoned about, everything is logical in some "aspect" and of some type prior to this "taking-in," though the discovery of the aspect and type be made by observation, with or without the assistance of inference methods. (S.)

Comment (D.). As a matter of discovery, I think I find that the existence of logical entities and of a process of inferential inquiry are one and the same thing. The process of inferential inquiry has its own characteristic or distinguishing marks, just like any other natural occurrence. Its peculiar marks are precisely those traits and relations that are called logical. This does not mean that they are constituted in the process of *their* being known. On the contrary, inferences, or existences having logical traits, must exist before they can be inquired into. When inquired into, the resulting proposition bears the same kind of relation to the existence it is about—or refers to—as any proposition sustains to the existence it is about. (I understand that here, as well as in 8 and 11, the difference between Dr. Spaulding and myself is one of fact; that is, it is a difference as to the state of things discovered upon inquiry. Hence my statements are not arguments against Dr. Spaulding's statements, but are reports of different findings.)

15. It is a consequence of *these results* (of making the judgment-proposition-observation situation itself a subject of inquiry) that the physical sciences, mathematics, logic, and metaphysics can be studied without the results of such studies or inquiries receiving a readjustment from so-called epistemology. This consequence is confirmed by observation of the history of science, mathematics, etc. (D. and S.)

REVIEWS AND ABSTRACTS OF LITERATURE

Swedenborg and the "Sapientia Angelica." FRANK SEWALL. New York: Dodge Publishing Co. 1910.

This is one of those excellent handbooks in that useful series of *Philosophers Ancient and Modern.* Like the volume on scholasticism, it is written by a partisan, but with much ingenuity and learning. In this case the ingenuity lies in the selecting of the parallels between the doctrines of the distinguished Swede and his successors, the learning in the attempt to interpret this eighteenth century system in the terms of the nineteenth century and after. Thus, in the chapter on cosmology and physics, the claim that Swedenborg anticipated Kant, Laplace, and others in the promulgation of the nebular hypothesis is upheld by so eminent an authority as Svante Arrhenius. Other Scandinavians likewise find "ideas belonging to the most recent times" in their compatriot's "wonder-book" the "Regnum Animale," but with less success. The claim, for example, of having given a complete theory of evolution is a palpable confusion between evolution in the literal sense and evolution in the present sense of epigenesis. Indeed the initial fault of the advocate is the attempt to read the present rather than the past into this Swedish system. Thus the "Principia Rerum Naturalium," beginning with its "First Simple" and its "First Natural Point" and concluding, "Composite things derive their origin from Simples, from the Infinite, and the Infinite from itself," all this seems merely a continuation of Descartes's "Le Monde," with the addition of Plotinus on the "Processes of Emanation." A similar criticism holds for the works dealing with physiology and psychology; there are both parallels with predecessors and a leaning towards the ancient mysticism. In the "Animal Kingdom" there is the same view as that of Hobbes as to corpuscular tremulation being the fundamental principle of the universe, and the same fallacy as to the process by which sensation becomes converted into imagination and idea. And with this "ultra-materialistic" view, with its futile search for the seat of the soul, there is conjoined a Leibnitzian forecast or conception of a society of immortal souls, and a Pythagorean interpretation regarding the harmonies between those souls.

Here the author asserts that "had Swedenborg's labors ceased at this point, the knowledge of the soul would have remained where his illustrious predecessors in these investigations, from Plato down, had left it, and where Kant, his contemporary, acknowledged it must be left forever so far as the power of pure reason is concerned—a sublime speculation without the elements of certainty and reality." How were these elements of certainty and reality to be attained? The avowed Swedenborgian says by a special, divine illumination vouchsafed to the head of the sect, who becomes henceforth the exponent of a philosophy no longer human but angelic. In this connection three dubious claims are made: that Swedenborg was a more logical guide than Kant in these transcendental paths; that his illumination is not to be identified with the immediate

knowledge of the Gnostics; and that, in this peculiar experience, there is nothing pathological. As to the first, it may be replied that the "angelic wisdom" which Swedenborg laid claim to was in the transcendent, not the transcendental, sphere, and the reason why Kant wrote his "Dreams of a Spirit-Seer" was not because he wished to cover his own "unmistakable borrowings" from the Swede, but because the latter was guilty of putting the supersensible in terms of the sensible; in fact, the Königsberger inveighed so strongly against the visualization of the moral law and the "exact material setting of the interior spiritual principles" precisely because it was a rank confusion of the noumenal and phenomenal. Secondly, that the "Arcana Cœlestia" is not to be identified with the various schools of theosophy and occultism is hard to grasp from the historical point of view. There are parts of this work that seem more like a return to the esoteric writings of the Neoplatonists than the "relations of 'things seen and heard' by a traveler returned from a hitherto unknown land." The only difference is that, while the Neoplatonists visualized with an Hellenic moderation and charm, Swedenborg's visions of purple angels and the white horse mentioned in the "Revelations" formed what Emerson once described as a sandy desert, entirely void of poetic expression. The third objection, that the "great transition," "the change of plane from material to spiritual realities," should be dismissed upon the "flippant assumption of lunacy" can be met, provided the critic be allowed to change the last offensive phrase to a serious assumption of the pathological. Psychologically, the visualizing power which made Swedenborg the mathematician he was, that same power, carried over into an imagined supersensible world, may be examined as a symptom of the abnormal. This is borne out by an unfortunate quotation from the "Spiritual Diary" as to the self-delusion of spirits: "It has been shown to me many times that spirits who spoke with me imagined that they were the men I was thinking of; nor did other spirits know otherwise. For instance, yesterday and to-day, one of them was so much like a person known to me in life, in everything (so far as I knew) pertaining to him, that nothing could be more like. Wherefore, let those who speak with spirits beware when spirits say that they are persons who are known to them, and that they are the dead."

This is the weak side of Swedenborgianism which, a generation ago, led its founder to be considered a spiritualistic medium and to-day, as the author unwittingly allows, "throws light on the problems of modern hypnotism, spiritism, telepathy, and like experiences." As the pathologist would find it hard to follow the sectary's statement that "for the first time appears a man who claims to have beheld with twofold vision the twofold universe," so the philosopher would scarcely agree to the statement that "probably no such complete survey of the whole realm of Being in a scientific form has ever been presented to rational contemplation." Swedenborgianism as metaphysics does not go beyond the metaphysics current two centuries ago. It consists of a triple dualism: in its cosmology between earth and heaven; in its anthropology between mind and body; in its psychology between intellect and will. The water marks

of the age being so evident, this can not be called an original document except in the terms of the lower criticism. Hence the hollowness of the claim of a truly new *organum* which constitutes Swedenborg's great contribution to philosophy, namely, his doctrine of influx, of discrete degrees and their correspondence. This triple claim needs analysis and rejoinder. That the cosmic principle is force, will, divine love emanating by wisdom into created spheres, is again a recrudescence of Neoplatonism; that these spheres are not a continuous plane, but in such degrees as to forbid the confusion of substance between spirit and matter, between God and nature, is merely a concession to Platonized Christian dogma; and, lastly, the doctrine of correspondences or the congruity between thought and things, between sense and symbol, partakes of the familiar habit of double interpretation set forth in the sixth book of the "Republic."

In connection with Swedenborg's lack of originality, the counter-claim of Emerson's similar defect may be met. It is true that to take from the New England transcendentalist the doctrine of correspondence would leave much of his writing dull and dark, but it is not true that this doctrine was derived from the learned Swede. The history of the Concord philosopher's relations to Swedenborg is briefly this: At the age of twenty-three he held that the Swedenborgian Sampson Reed's "Growth of the Mind" had the aspect of a revelation; ten years later he quotes from the *New Jerusalem Magazine* the striking statement that the visible world is the dial plate of the invisible, and praises the head of that church for having pierced the emblematic or spiritual character of the visible, audible, tangible world. But what he gave with one hand he took back with the other. In his "Journal," a few years later, he remarks: "The new light, brand new, of the Swedenborgians, is old as thought. I match every saying of theirs with some Greek or Latin proverb." Finally, in his "Representative Men" he offers that kindly yet humorous criticism of Swedenborg the mystic which the latter's followers usually fail to give in full. In this Emerson makes Swedenborg another example of the difficulty, even in a highly fertile genius, of proving originality. Among the reasons for this difficulty are his indebtedness to Lord Bacon in the teaching that truth and nature differ only as seal and print, and to Plato for the doctrine of correspondences which he carries to such extremes as to "make every hose fit every hydrant." Now this crucial doctrine of correspondences Emerson himself was cognizant of from his college readings of Cudworth's "Intellectual System of the Universe" and from the poetic symbolists of the older English lines like Quarles and Vaughan and Herbert. Indeed from these British sources it may be shown how Emerson, before ever he discovered the Americanized Swedenborgianism of Sampson Reed, was familiar with the essentials of Platonism—from the scale of being to the microcosm and macrocosm. So while he praises the Swede for "the thoughts in which he lived"—"the fine secret that little explains large, and large little, and the connection that subsists throughout all things"—he needs must add certain observations. Taking them up in the order of those controverted points which we have already noted, they are these: First, that Swedenborg is not a true transcenden-

talist in the Kantian sense, but a believer in an identity-philosophy in whose universe "all the figures speak one speech, all the interlocutors Swedenborgianize." Second, that his angelic wisdom is not unique and peculiar to himself, but akin to that claimed by Socrates, Plotinus, Porphyry, Behmen, Bunyan, and Fox. Yet, in the third place, as to whether all this is the accompaniment of disease, he grants that it is hard to say. Swedenborg "admitted the perilous opinion, too frequent in religious history, that he was an abnormal person, to whom was granted the privilege of conversing with angels and spirits, yet modern psychology offers no similar example of a deranged balance; the principal powers continue to maintain a healthy action, and to a reader who can make due allowance for the reporter's peculiarities, the results are instructive. . . . Nevertheless there is a sandy diffuseness in the plain theologic Swedenborg; he is strange, scholastic, didactic, passionless; his hells are dull, his angels are country parsons, his heaven an evangelical picnic."

I. WOODBRIDGE RILEY.

VASSAR COLLEGE.

William James. EMILE BOUTROUX. Paris: Libraire Armand Colin. 1911. Pp. 142.

It was from France that William James first received his philosophic inspiration, from France that he received his earliest recognition and his greatest honor. It is, therefore, right and fitting that the first book written in memory of him should be from the hand of a Frenchman. The author, M. Boutroux, is a friend of long standing, Mr. James's sponsor in the Institute. His book is a memorial of this fine friendship as well as an appreciation of genius. It is marked by the same perfect form, the same combination of subtlety and luminousness, which are the distinctive qualities of all its author's work. It is unusually happy in its appreciation of the master's personality, his traits, and his life. But finely sympathetic, delicately comprehending in this respect, it does not seem so adequate in its delineation of his philosophy. That, in its outline clearly grasped, expounded with the precision of method and language that are natural to M. Boutroux, nevertheless seems in some respect lacking; its essence seems somehow unrendered. The opinions are the opinions of James, but the spirit is the spirit of Boutroux. It carries a different connotation and opens other vistas.

That this should be so is no reproach to M. Boutroux. The artist inevitably represents himself much more than his subject, even in his most perfect work: the mind that tells the story and gives it life tends to dominate the facts that it narrates; it creates the values of these facts, establishes their center and order of preference. This is what I find in M. Boutroux's book—other values, unfamiliar values. There is no single statement that can be altogether denied, no one opinion that can not be attributed to William James, yet the whole does not seem like his philosophy. There seems to be a shift in emphasis and perspective—precisely where or how I can not easily say. I get the feeling of a dualism between the "inner life" and the outer, which I know to be important in the

thought of M. Boutroux, but which I know radical empiricism was meant to abolish. I get the feeling of the centrality of religion and religious experience, which I believe to have been, for James, marginal merely. He did not, after the ancient fashion of philosophers, make room for religion by a destructive and sceptical criticism of science, but sought rather to make it establish its own validity according to the methods and standards of science. The objectivity of the sciences and of psychology, far from depending on the objectivity of the religious experience,[1] are the measures of that. For the motives which led the master to the study of religion were scientific and humanistic. As he defended psychical research in the interest of justice and scientific fair play, so he dealt with religion. I can hardly believe, with M. Boutroux,[2] that it was science itself that James objected to, so much as the narrowness and intolerance that sometimes vitiate science and make it unreal. Nor can I assent to the interpretation which suggests the spiritistic hypothesis and a kind of mystical rationalism as being unforeign to the Jamesian insight. I can not agree that the essential idea of his metaphysics was "the identification of reality with largest, completest, profoundest, and directest experience," or that he ever would accept the existence, "behind the static reason of dialectic with its immutable categories, of a *reason* living and concrete, whose business is not with empty concepts, but with realities themselves, and envious, not only of unity, immutability, and necessity, but also, and above all, of free harmony and internal communion."[3] This would indeed bring Mr. James, as M. Boutroux suggests, in line with the classic tradition, but no philosopher of this latter day, as Mr. Pitkin well pointed out, is so untraditional as William James. His note is truly a different note and a new note, far more so than even Bergson's, and it is significant of changes by the rest of the intellectual world still unfelt.

However, all this is ungracious and by the way. There will be as many interpretations of James's philosophy as there will be interpreters and each will necessarily be a different thing. It is a happy and fitting event that the first interpretation shall be the work of a scholar so profound, so understanding, and so sympathetic as M. Boutroux.

H. M. KALLEN.

UNIVERSITY OF WISCONSIN.

Protestant Thought before Kant. ARTHUR CUSHMAN MCGIFFERT. New York: Charles Scribner's Sons. 1911. Pp. 261.

Dr. McGiffert has compressed within the limits of two hundred and sixty-one duodecimo pages a clear and penetrating account of the development of Protestant theology beginning with the Reformers of the sixteenth century and ending with the appearance of Immanuel Kant. The arrangement of the materials is as follows: after a short introduction there is one chapter on each of the four leading Reformers, Luther, Zwingli, Melanchthon, and Calvin—that on Luther being the longest and

[1] *Cf.* p. 93.
[2] *Cf.* p. 139.
[3] P. 139. Italics mine.

analytically the most complete. Two important groups of Protestant radicals, the Anabaptists and the Socinians, are treated together in Chapter 6. Then follow two chapters of moderate length on the English Reformation and Protestant scholasticism respectively. Pietism receives more extended treatment, and the title is stretched so widely as to include the whole of English Evangelicalism and the Edwardean theology in America, as well as the German movement begun by Spener, which is Pietism proper. This is one of the best parts of the book. The chapter on Rationalism, which is much the longest, devotes especial attention to English Deism, but does not altogether neglect the kindred movements of thought in Germany and France. It closes with a short sketch of Unitarianism in America.

The author's task certainly was not easy. To follow across ten generations the currents of religious thought flowing through four of the greatest countries of the western world—and to do it within such brief compass—demanded historical knowledge and literary skill of a high order. Considerable omissions were imperative. The distribution of emphasis was a task both difficult and delicate. Through his judicious selection and arrangement of materials, our author has succeeded in producing an impression both of unity and of comprehensiveness, which is remarkable. Add to this the fact that the book is written in a simple, lucid, and vigorous style, and it is evident that we have before us what bids fair to become an exceptionally influential work in a difficult and poorly cultivated field.

Professor McGiffert's historical judgments exhibit his usual candor and discrimination, yet he makes no special effort to disguise his sympathies. He is unsparing in his exposure of what he regards as logical inconsistencies. Almost every one, except an occasional Deist, is "inconsistent." Luther and Melanchthon,—Zwingli, Calvin, and Arminius,—the Anabaptists and the Socinians,—Wesley, Edwards, and Butler,—the Congregationalists and the Pietists,—all fall under the same condemnation. In view of the insignificant number of those who escape this censure, one might venture to doubt the validity, or at least the importance, of making logic the test of truth. And for one so deeply interested, as our author unquestionably is, in the application of religion to life, it would seem to be a fair question whether after all it is not better to be illogical, say, with John Wesley, than to be logical with Matthew Tindal. Even Lord Herbert, whom Dr. McGiffert so justly admires, once remarked of philosophy and logic, "I am confident a man may have quickly more than he needs of these two arts."

It is always hazardous to attempt to reformulate another's main thesis, yet the reader of this admirable little book may be tempted to reduce what the author calls "the medieval view" of religion to the simple statement that *God saves men,* and, in contrast with that, to reduce what he calls "the modern view" to the simple statement that *men save themselves.* If this proposed reduction be even measurably correct, our preference can hardly go altogether with the modern view, logic or no logic. And we are glad to believe that this pragmatic judgment of the tendency of the work

as a whole will not be utterly unwelcome to an author so frankly in sympathy with the principle of pragmatism.

JOHN WINTHROP PLATNER.

ANDOVER THEOLOGICAL SEMINARY.

JOURNALS AND NEW BOOKS

ARCHIV FÜR SYSTEMATISCHE PHILOSOPHIE. XVII. Band, Heft 1, February, 1911. *Ueber falsche Interpretationen des kritischen Realismus und Voluntarismus Wundts* (pp. 1–43): A. SICHLER. – F. Klimke's work, "Der Mensch, Darstellung und Kritik des anthropologischen Problems in der Philosophie Wundts," is based on glaring misinterpretations. It has been inspired partly by Külpe's misleading criticism of Wundt, but mainly by the work of the theologian C. Willem, "Die Erkenntnisslehre des modernen Idealismus." The many quotations from Klimke's book clearly show that his criticism is directed not against Wundt's philosophy, but against a misinterpreted philosophy of Wundt. *Für und wieder den Monismus* (pp. 44–99): P. SCHWARTZKOPFF. – Monism, even in its advanced *idealistic* form such as developed by Hartmann, is one-sided and self-destructive, because it ignores the *fact* of causality. The vitalizing truth of monism is its immanence-idea; but modern monism disregards immanent activity, postulates the identity of the all-oneness, and taxes a lifeless all-substance with the task of explaining a vital, active world. It all springs from misputting the problem. Monism asks, How do matter and mind interact? and answers, The two are aspects of one at bottom self-identical entity. Now, interaction of identities is an absurdity. Following Lotze, monism ought to put the question thus: How in general do things interact? The answer would be: They interact because they are intrinsically connected by one common factor, viz.: the active principle of causality, whose effect is the very manifestation of this world being, and if this manifestation be consciousness, well then, this world being is conscious being. The immanence idea thus conceived is quite compatible with the idea of transcendence and renders transient causality understandable. Finally, on the religious side it makes possible the conception of an innerworldly relation between God and world. *Grundgedunken einer Sittlichkeit* (pp. 100–106): V. SCHLEGEL. – Man, the ego incommensurable with space and time, possesses power and will to perpetuate his actuality, to do which environment impels him to *divide* and ramify into family and nation. Pleasure and pain are the guides of man's self-preservation. Good is what causes pleasure, evil what creates pain. Love and hate are the respective memories of pleasure and pain. Already the primordial cell is endowed with these dispositions. *Versuch einer Zeittheorie* (pp. 107–110): G. MÜLLER. – In order to remove the contradiction between being and becoming, the latter must be conceived of as some form of being. Indeed, the course of events is the resultant of three components: (1) time, (2) present, or present point, and (3) temporal space of linear dimension. Thus becoming is an existing whole of

which we finite beings experience but a single phase, a so-being, given by the present point. *Die Produktionsform als geschichtlicher Faktor* (pp. 111–115): W. WAGNER. – According to Marx's economico-materialistic conception of history, the form of production is the main, if not the only, factor determining social formations. Philosophical criticism finds little difficulty in refuting this doctrine; yet there is no need of spilling out the child with the bath. Many a change in social life is a function of change in the form of production. Berger's Luther biography is a lucid illustration of how the transition from the barter form of exchange to the money medium has stimulated the psychical change from the social restrictions of the medieval period to the individual freedom of the Reformation. *Einteilung der möglichen Folgerungen* (pp. 116–123): W. FRANKEL. – All possible inference rests (1) on reciprocity of relations; (2) on a definite relation of any concept to a term of the premise; and (3) on equivalence of "pro- and post-posed" propositions. Examples to (1): When it rains the ground is wet, hence when the ground is not wet it does not rain. To (2): categorically: The flower is red, hence the flower is something red; functionally: all men are mortal, hence also this man is mortal. The fact, moreover, that this principle allows us to infer from $S - P$ (*a*) non-S — non-P and (*b*) non-$S - P$, leads us to consider, with Meinong, superlogical extension which embraces also the empirically impossible (such as the quadrangular circle which belongs to the circle-existence but not to the existing circles). Finally to (3): A is B, hence it is true that A is B. Here the first proposition is pro-posed, the second stating truth or falsehood is post-posed. *Recensionen. Neueste Erscheinungen.*

Arnold, E. Vernon. Roman Stoicism. Cambridge: University Press. 1911. Pp. xi + 468. 10s. 6d.

Brown, William. The Essentials of Mental Measurement. Cambridge: University Press. 1911. Pp. vii + 154. 3s. 6d.

McComas, H. C., Jr. Some Types of Attention. *Psychological Monographs,* Vol. XIII., No. 3. Baltimore: The Review Publishing Co. 1911. Pp. 55.

Myers, Charles S. A Text-book of Experimental Psychology, with Laboratory Exercises. Second edition. Parts I. and II. New York: Longmans, Green, and Co. 1911. Pp. xiv + 344; 107.

Proceedings of the Aristotelian Society. New Series, Vol. XI. Containing papers read before the Society during the Thirty-second Session, 1910–1911. London: Williams and Norgate. 1911. Pp. 234. 10s. 6d.

Starch, Daniel. Experiments in Educational Psychology. New York: The Macmillan Co. 1911. Pp. vii + 183. $0.90.

NOTES AND NEWS

In the August *Comptes Rendus* of the Académie des Sciences there appears a communication from Dr. M. Kunz (of Dresden) relating the result of an inquiry made by him into the popular notion that blind people develop a kind of sixth sense, giving them notice, other than through their eyes, of the proximity of objects. The result of the experiments that he describes, vouched for by a great number of German doctors who assisted him, is that no such sense exists, but that the appearances mistaken for it are due to increased sensitiveness of the skin only. This is generally limited to the skin of the face, whence it can be expelled by the use of cocaine and the like, and is non-existent at the top of the head and the back of the neck. It never appears, he says, in persons who have become blind as the result of an injury, but is to be found in many who are not blind at all, including those who suffer from hysteria. It is also entirely independent of hearing, and is sometimes found among those who are not only blind, but deaf as well.—*Athanæum.*

Cœnobium has undertaken to elicit, by means of an elaborate questionnaire, an account of the religious beliefs, conceptions, and opinions of a large number of individuals. The results of the inquiry, which, it is hoped, will be of great psychological interest and throw much light on the subject of religion, will be published in *Cœnobium's* Almanac for 1912. Copies of the questionnaire may be obtained from the editor of *Cœnobium,* Lugano, Italy.

Dr. W. L. Johannsen, professor of plant physiology in the University of Copenhagen, will deliver a series of lectures on "The Modern Principles of Heredity" at Columbia University, under the auspices of the departments of botany and zoology, from October 13 to November 3. The topics of the several lectures are: "The Problem of Personal Characters," "The Problem of Unit Factors," "Problems of Correlation and Sex," and "The Problem of New Biotypes."

Mr. Heinemann announces under the title of "The Modern Criminal Science Series" translations of some of the most interesting volumes by Continental writers on different phases of crime and criminality. The first four to appear will be: "Criminal Psychology," by Hans Gross; "Modern Theories of Criminality," by C. Bernaldo de Quiros; "Crime: its Cause and Remedies," by Cesare Lombroso; and "Criminal Sociology," by Enrico Ferri.

Professor Frederick Starr, of the University of Chicago, whose anthropological studies have covered Mexico, Japan, and the Kongo, sailed from Seattle in August for Korea, where he will spend the next few months.

As a memorial to Noah Porter, formerly president and professor of philosophy at Yale University, it is proposed to erect a gate at the south end of University Avenue at a cost of $18,000.

Dr. David Spence Hill has been appointed professor of psychology and education at Tulane University.